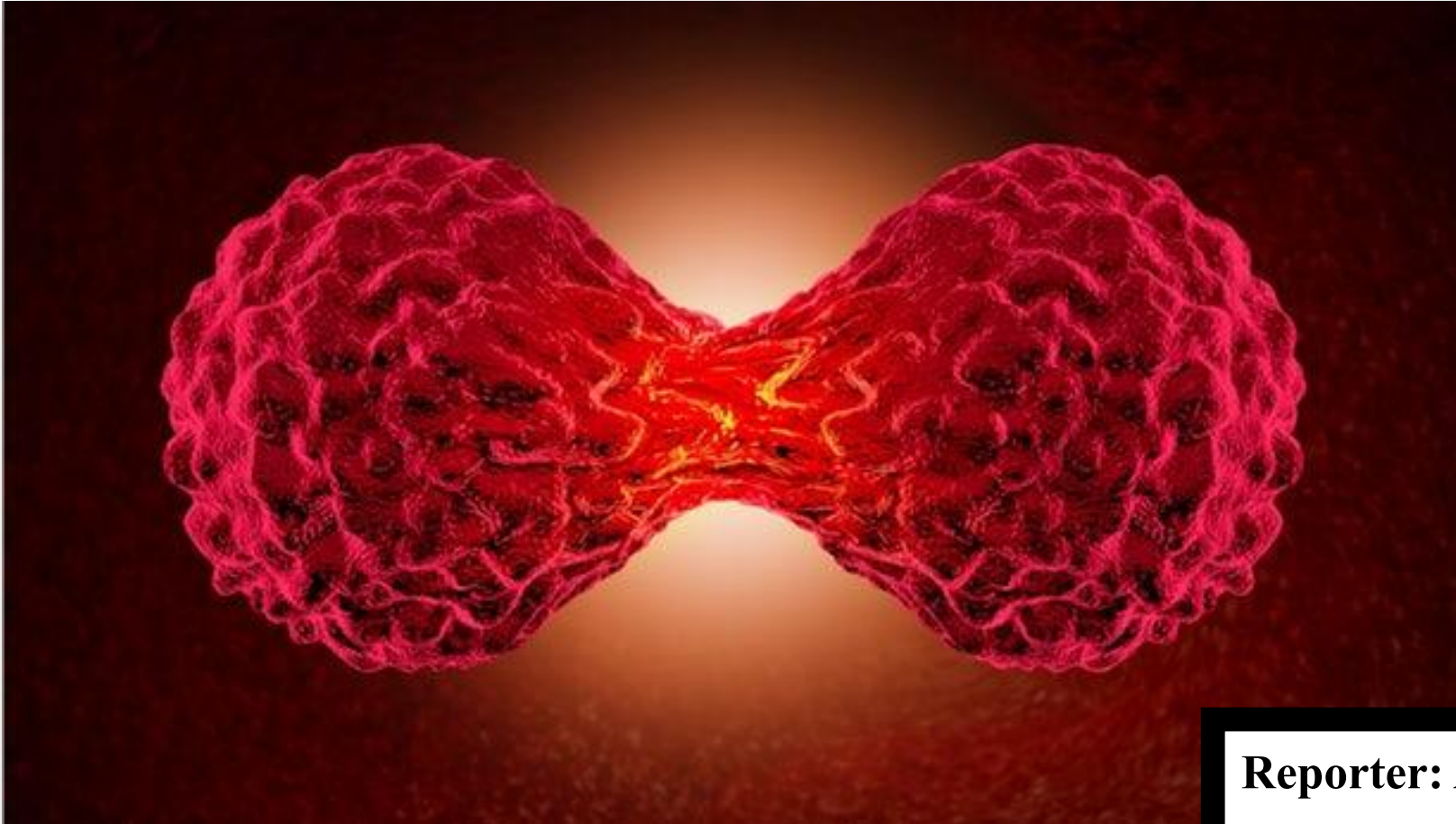
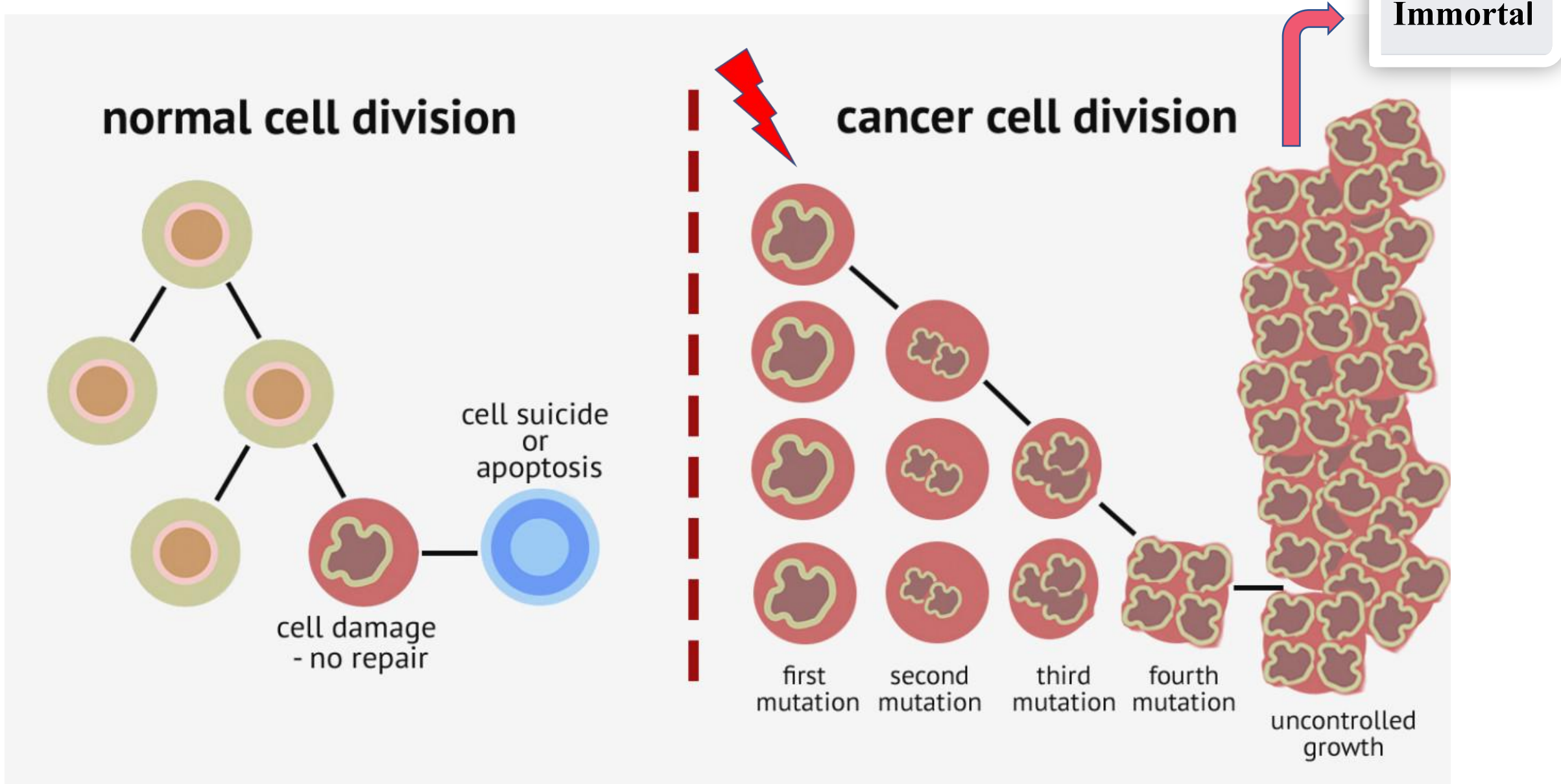


Unlocking The Mysteries of Cancer



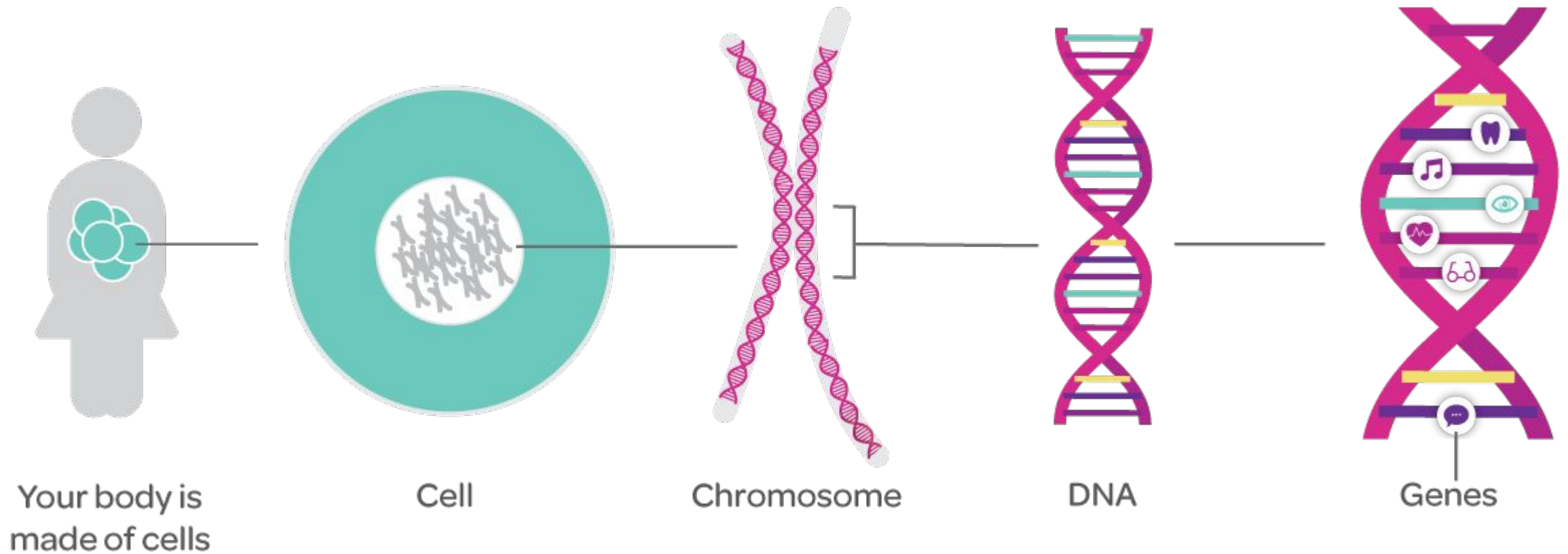
Reporter: Anna Steepochkina

What is cancer?

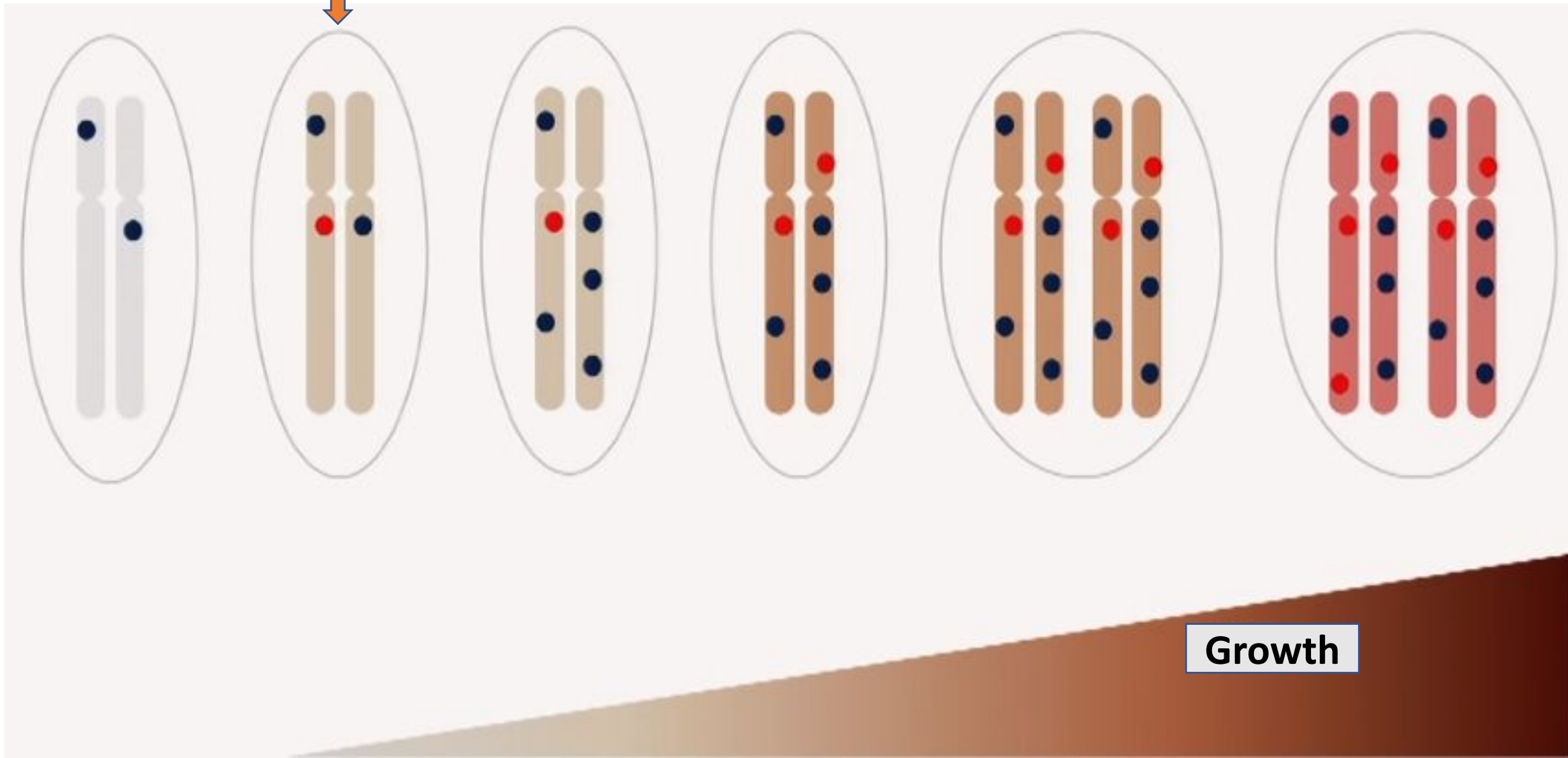


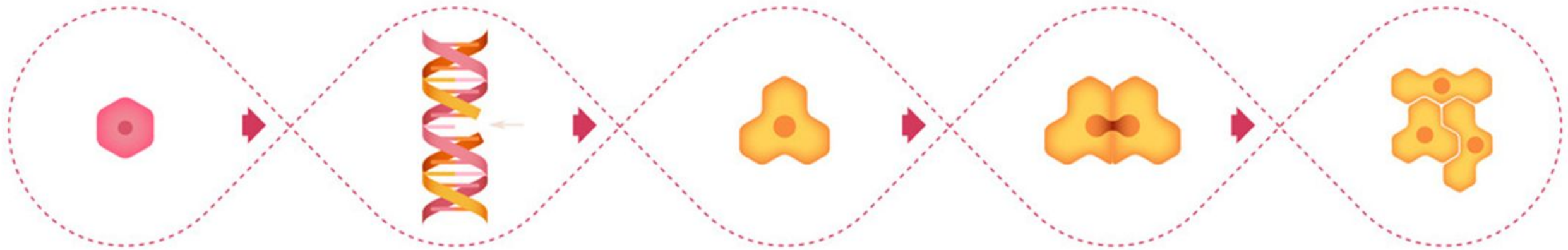
How does cancer start?

Carcinogenesis is a **multi-stage** process and begins with a *genetic defect*.



Driver mutation





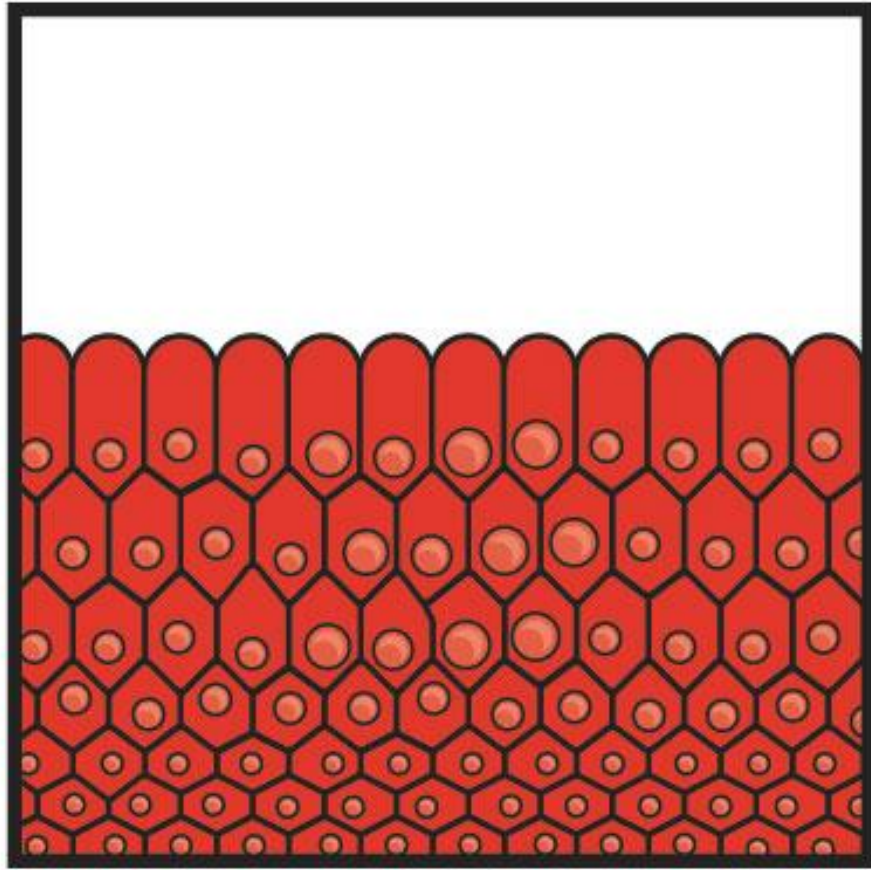
Step. 1
HEALTHY
CELL

Step. 2
DAMAGED DNA
IN CELL

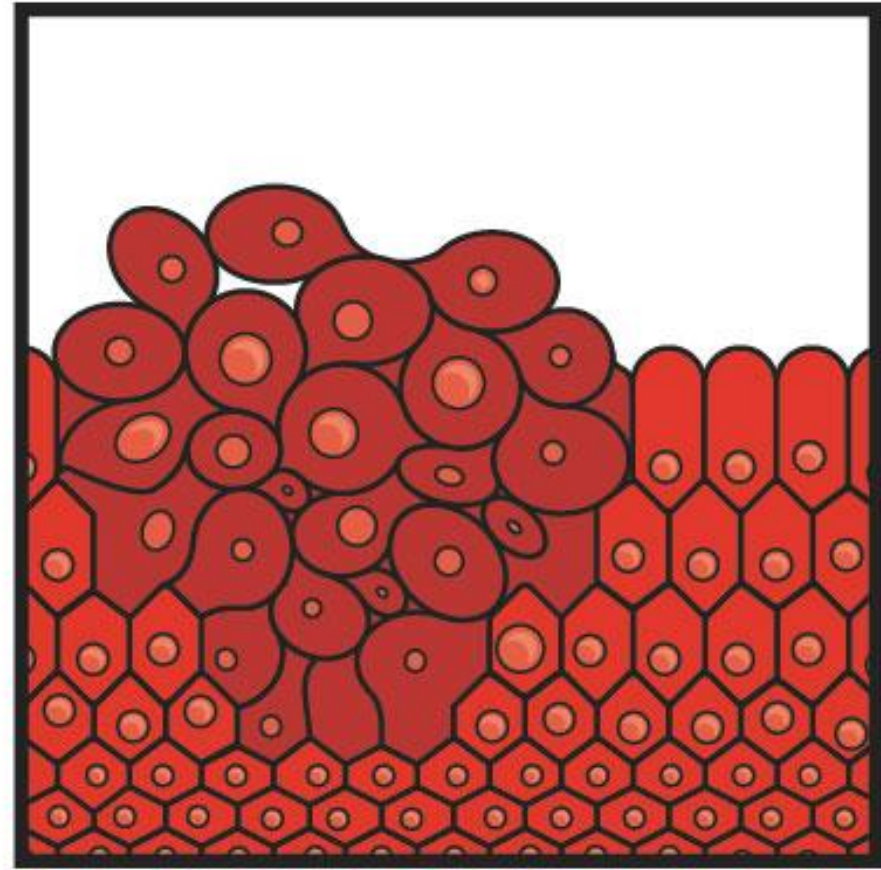
Step. 3
CELL BECOMES
MUTATED

Step. 4
MUTATED CELL
BEGINS UNCHECKED
REPRODUCTION

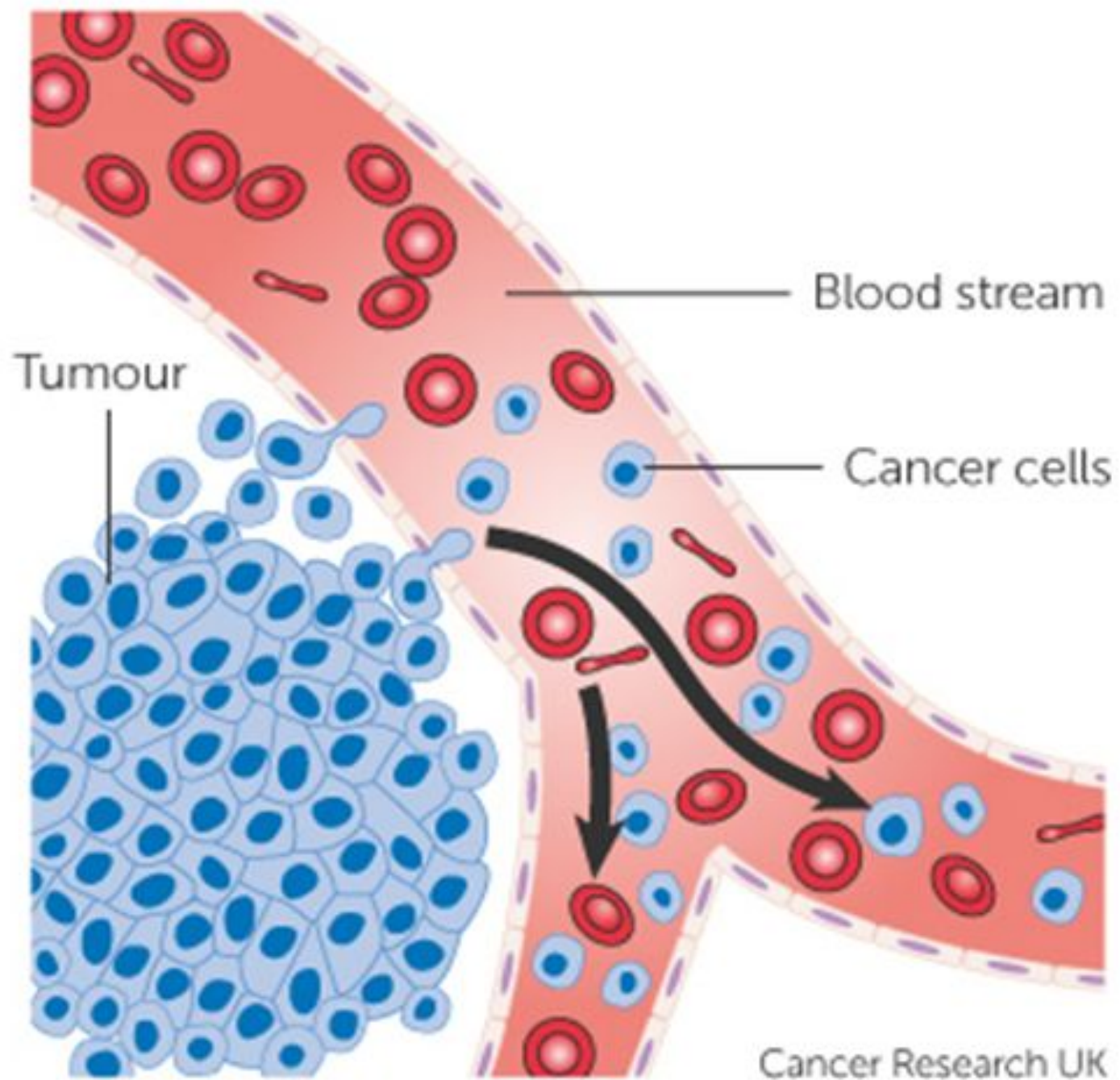
Step. 5
MUTATED CELLS
GROWN IN NUMBER



Normal cells



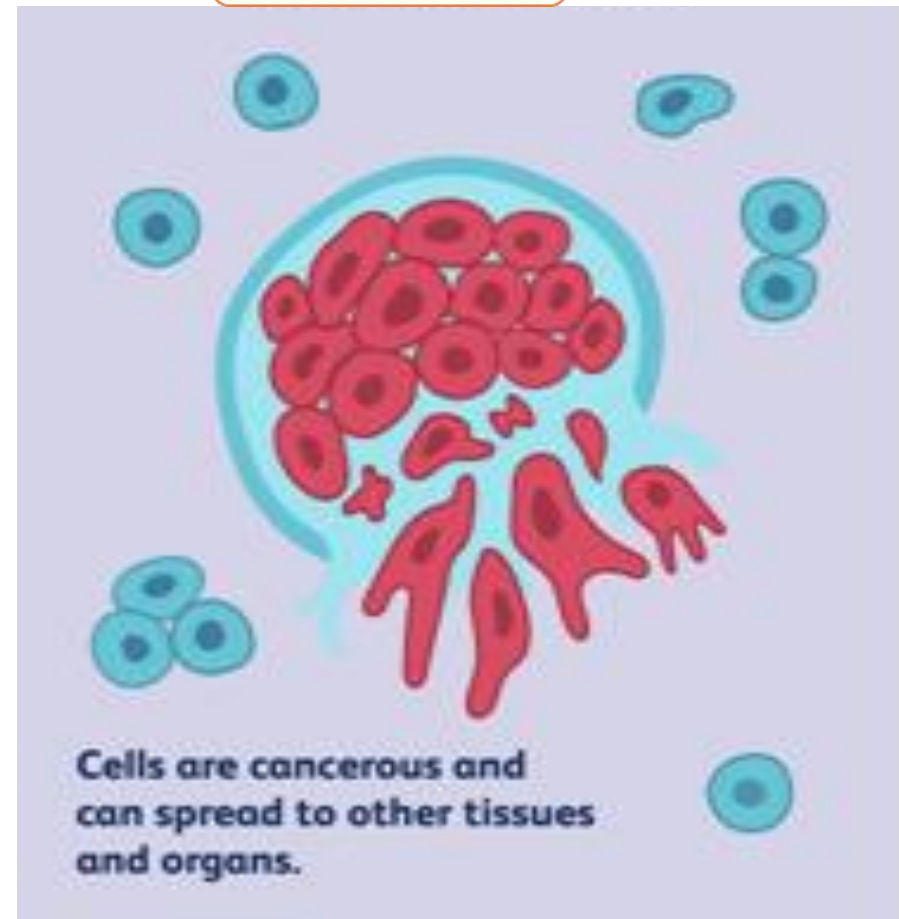
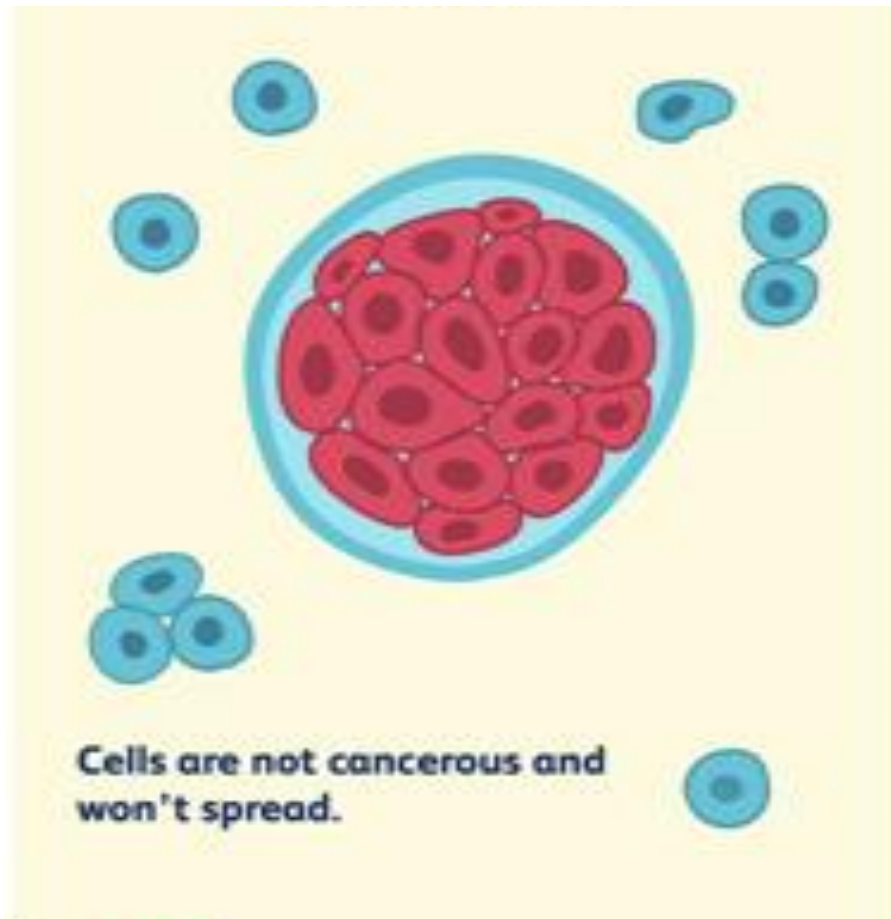
Cells forming a tumour



Tumors

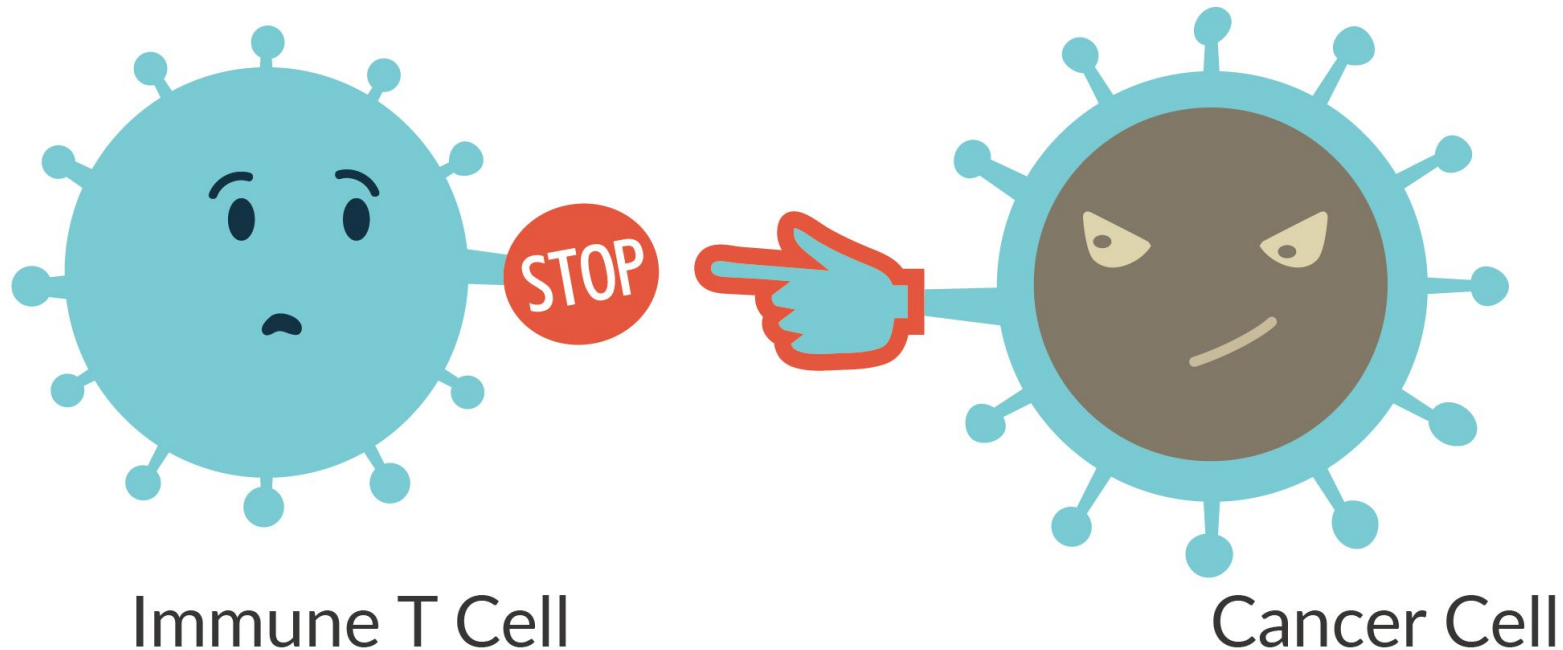
Benign

Malignant



How Cancer Fools the Immune System?!

Cancer cell presses the STOP button of the immune T cell to stop the attack.



Checkpoint inhibitor blocks the STOP button, “taking the brakes off immune.”



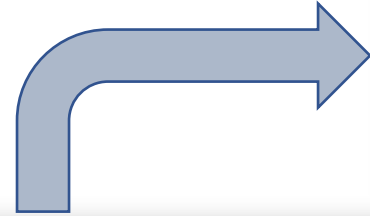
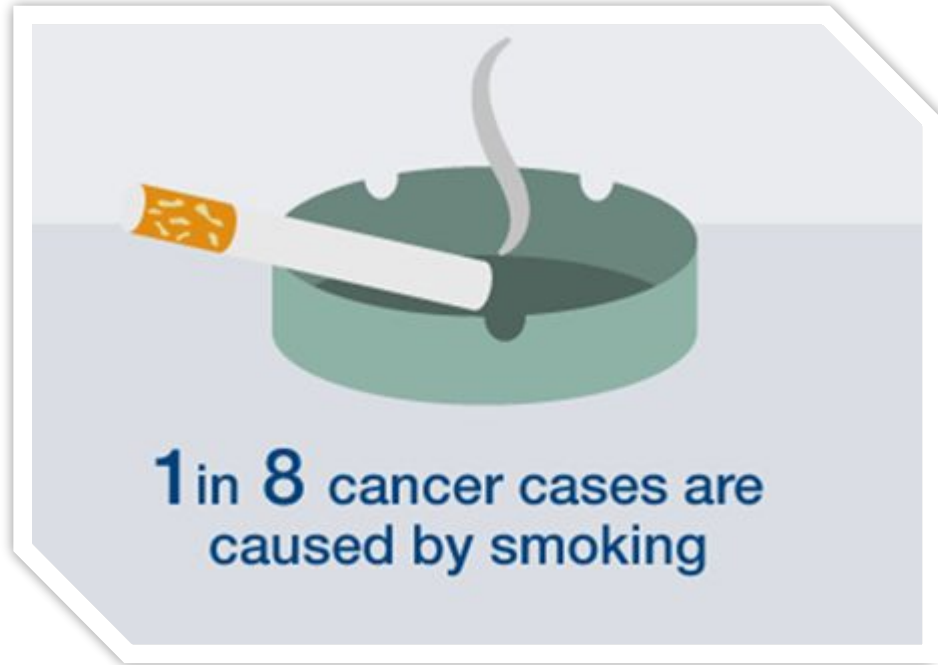
Immune T cell is re-activated and can start attacking cancer cells.



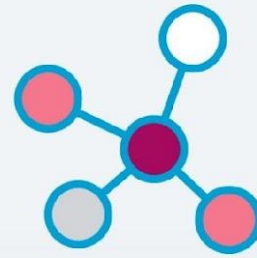
4 IN 10 CANCERS CAN BE PREVENTED



1. Tobacco



50 are known to cause cancer



6,000+
chemicals are in cigarette smoke

Smoking can cause 16 types of cancer



Tobacco use* causes cancer throughout the body.

Mouth and throat
(oral cavity and pharynx)

Voice box
(larynx)

Acute myeloid leukemia

Kidney and renal pelvis

Uterine cervix

Urinary bladder

Esophagus

Lung, bronchus, and trachea

Liver

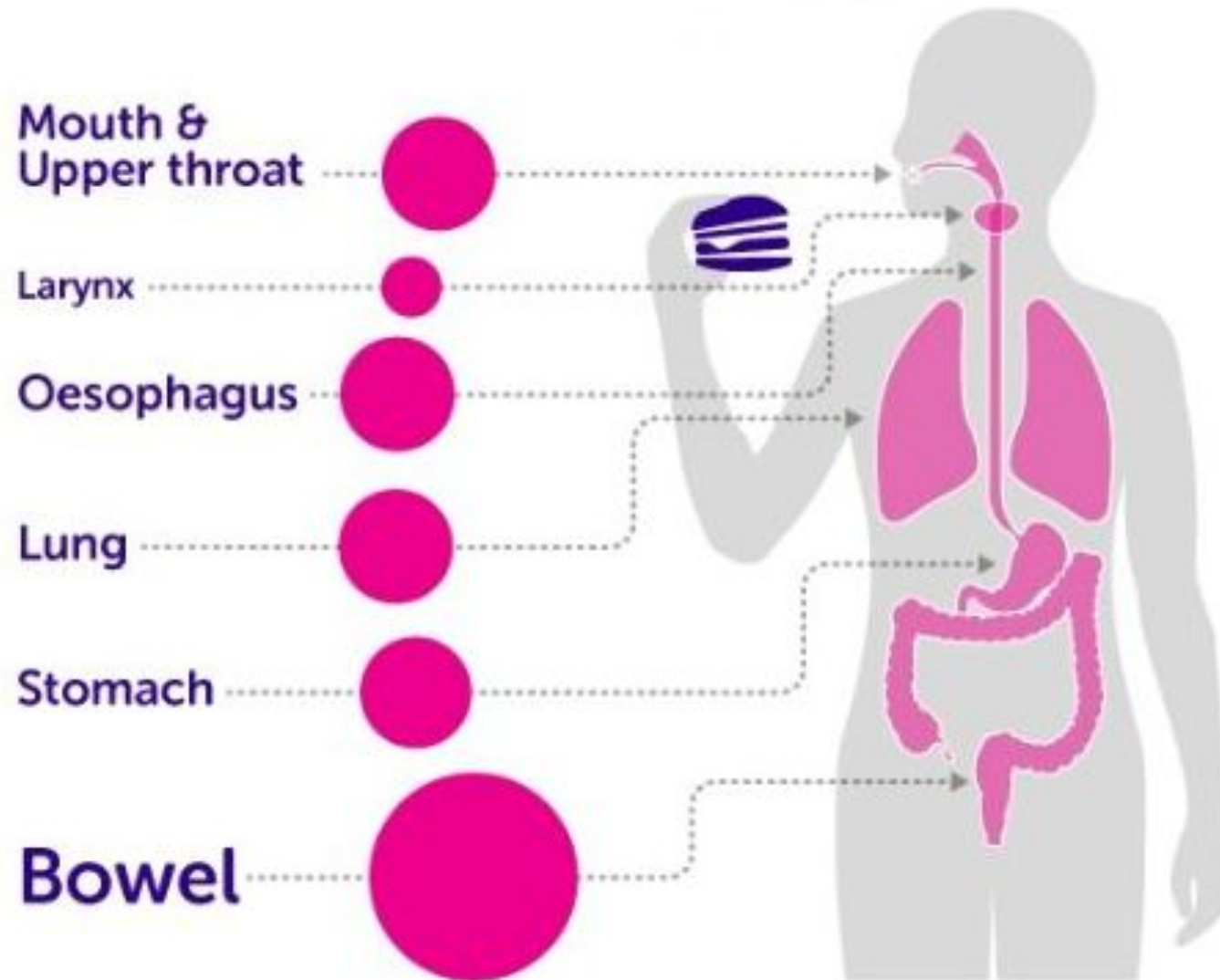
Stomach

Pancreas

Colon and rectum



2. Physical inactivity, obesity



Weight Management Tips



Just **1 or 2 sessions per week** of moderate-intensity physical activity was sufficient to reduce cancer mortality risks.



Eat more fruits and vegetables, lean protein and whole grains.

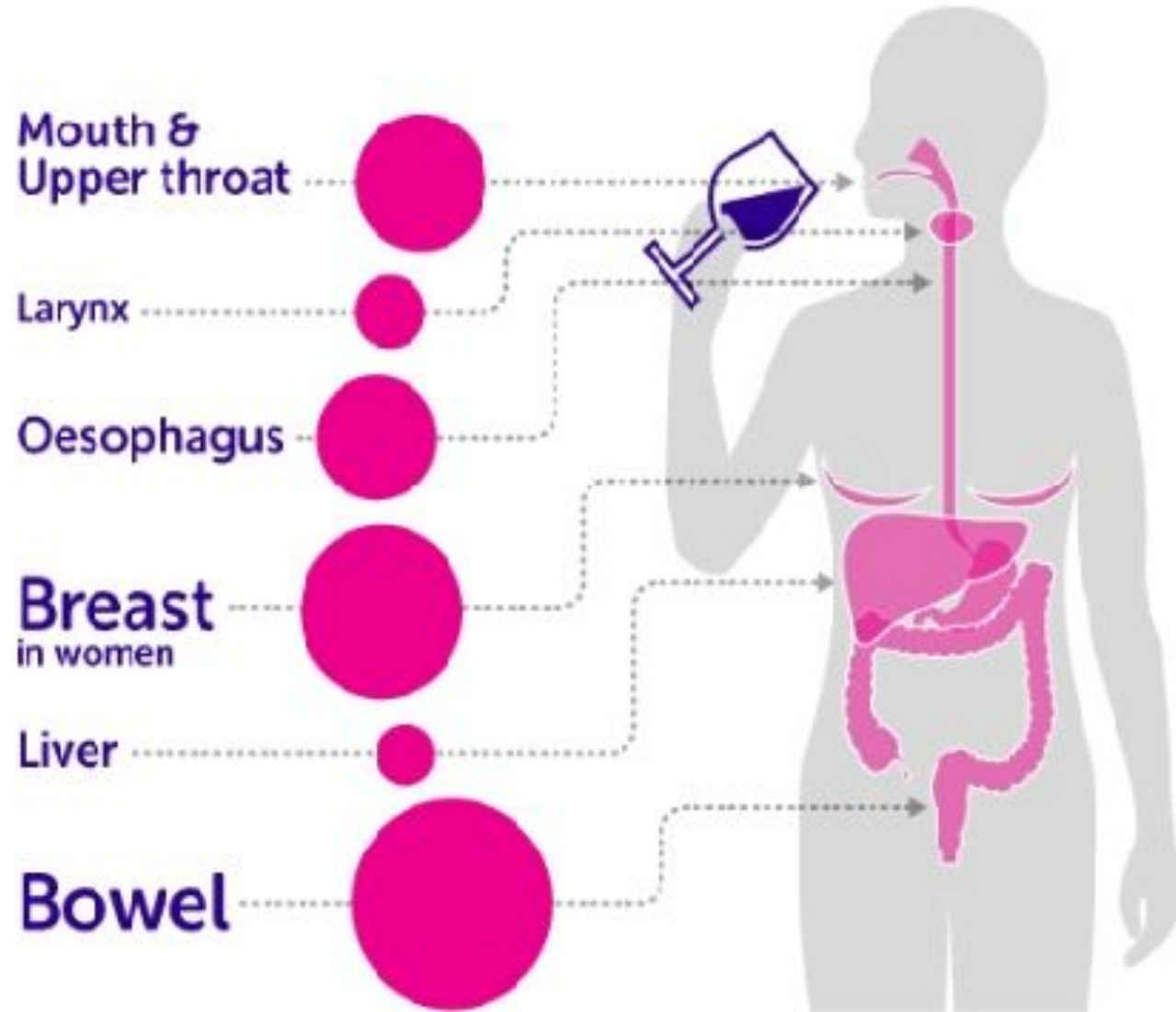


Limit your intake of trans fats, refined sugar and salt.



Eat according to your body weight and level of physical activity.

3. Alcohol use



4. Infections

CANCER-CAUSING PATHOGENS



*HELICOBACTER
PYLORI*



HEPATITIS B VIRUS
(HBV)



HEPATITIS C VIRUS
(HCV)



HUMAN
PAPILLOMAVIRUS
(HPV)

5. Environmental pollution



Every year, around
7 MILLION DEATHS
are due to exposure
from both outdoor
and household air
pollution.

Air pollution is a major environmental risk to health. By reducing air pollution levels, countries can reduce:



Stroke

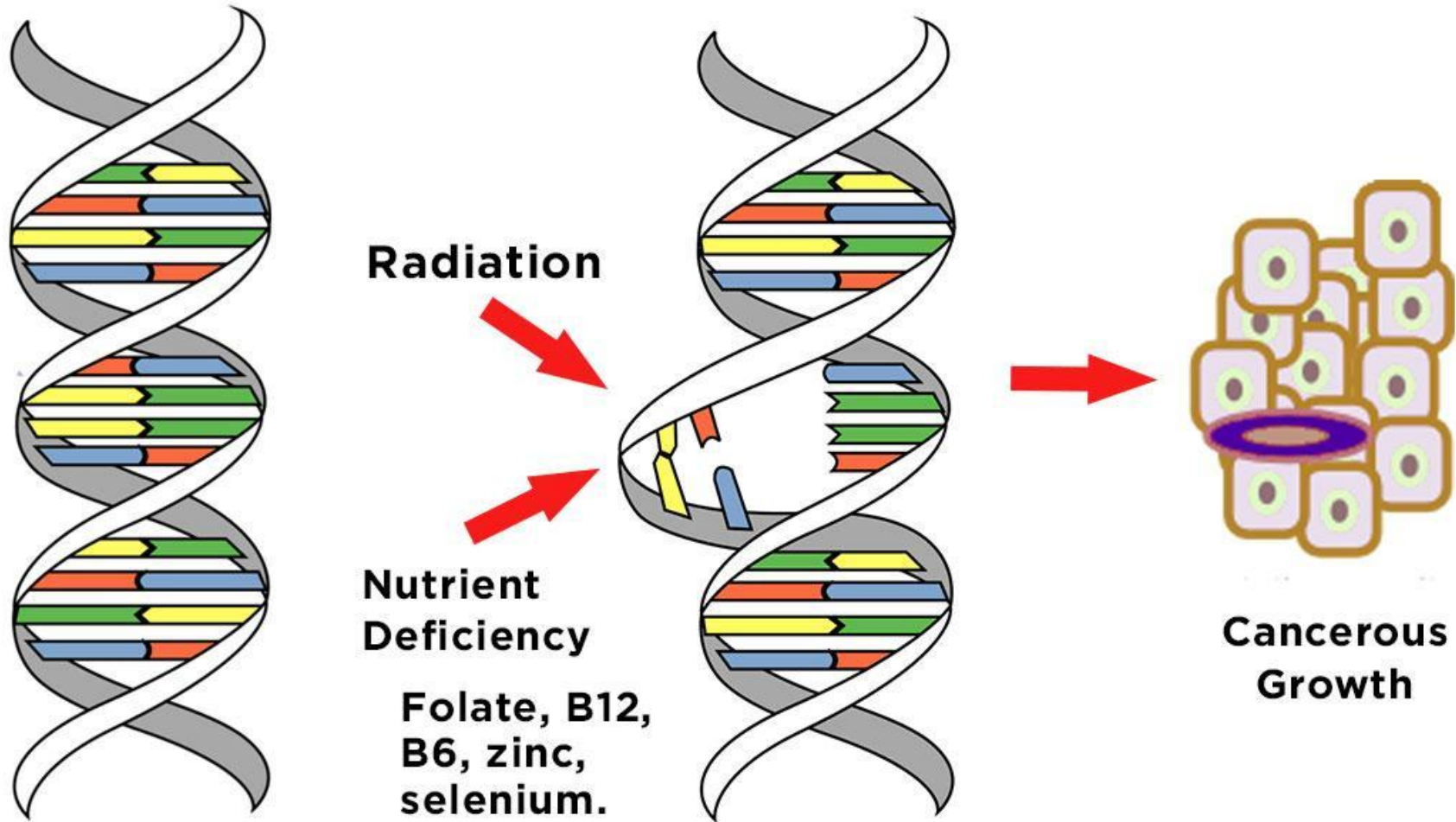


Heart disease



Lung cancer, and both chronic and acute respiratory diseases, including asthma

6. Radiation



WE CAN



PREVENT CANCER

Thanks for your attention!

